

**Amendments to the Drawings:**

The sheet of drawings attached following page 8 of this paper includes changes to Fig. 2. This sheet replaces the original sheet. The drawing has been changed to designate Fig. 2 as Prior Art.

### **REMARKS**

Applicant has read and considered the Office Action dated February 10, 2009 and the references cited therein. Claim 1 has been amended. Claims 1-7 are currently pending. Reconsideration is hereby requested.

In the Office Action, the drawings were objected to. The Action indicated that the subject matter of claim 7 must be shown or the feature cancelled from the claim. Applicant respectfully submits that there is no need for a drawing since a person skilled in the art would readily understand this embodiment and the step of injecting an additional layer from the disclosure. Applicant asserts that there is no additional need to clarify or support the subject matter recited in claim 7 and Applicant request that the objection be withdrawn.

With respect to the objection concerning Figure 2, this figure has been labelled as PRIOR ART, as requested. Applicant requests that the objection be withdrawn.

Claims 1 and 4-7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Balint, Orito and Kingsbury. Applicant traverses the rejection. Independent claim one has been amended and now recites:

1. An injection process for forming a retroreflector including a plurality of prisms each having three reflective optical surfaces oriented as a pyramid where all the prisms are attached to a common support in the form of flat portion of the reflector, the injection process taking place on a matrix mold having a plurality of prisms that each define a mold cavity, the process comprising the steps of:
  - a) injecting a first layer of plastic on the matrix mold for partially filling up each prism shaped mold cavity to form simultaneously the three reflective optical surfaces free of shrink marks and a first layer of the flat portion up to a predetermined substantially uniform thickness so as to further define a recessed portion corresponding with each said cavity of the prisms; and
  - b) injecting a second layer of plastic in the matrix mold cavity and onto the first layer,

the second layer including a prism portion inside the three reflective optical surfaces filling up the recessed portion defined in each cavity of the prisms so that second layer takes the shape of the recessed portion and said second plastic further defines outside the recessed portion a second layer of the flat portion on an exterior side of the first layer. (emphasis added)

Applicant asserts that the combination of cited references does not render claim 1 obvious. It can be seen that Orito JP '733 teaches **two separate mold cavities** to mold the prism in a two step process. The prism of Orito does not have the flat portion that is a common support for the prisms. Moreover, Orito does not mold a plurality of prisms at once.

Indeed, Orito recites:

"The movable side core 13 is withdrawn rightward by the command of a control device 15 and the planar part 20a is allowed to correspond with the P.L. surface by forcing the dammy (sic) core 20 upward, thus, only the stationary side cavity communicates to the runner 17. Following this, a primary molding is effected by injecting molten resin into **the stationary side cavity 5a**, so that a primary molded item is obtained by cooling and curing it. Then, as the dammy (sic) core 20 is moved downward and the movable core 13 is slid leftward, the position of the stational side cavity 5a and the position of the movable side cavity 13a correspond with each other. On the next place, a secondary molding is executed by injecting molten resin **into the movable side cavity 13a**. In this operation, it is joined to be integrated with the primary molded item in the stationary side cavity 5a, resulting in the formation of a prism." (emphasis added)

In contrast, the present invention, as recited in new independent claim 1, provides a **single mold cavity** that is used in the first and the second injection steps to mold a single prism and this single mold cavity per prism is duplicated to make **a matrix of identical prism cavities** to mold several identical prisms.

Moreover, Orito and Kingsbury US '030 do not teach **a flat portion** used to be the common support of **the plurality of prisms**. The **flat portion** and the **prisms present** the difficult challenge of molding a high quality part that has a large thickness variation that is NOT the same type of part and the same problem faced/solved by Orito and Kingsbury US '030. Neither Orito nor Kingsbury would be able to mold the prisms and flat portion at once in a single mold cavity using their teachings, as recited in amended independent claim 1.

The Examiner's attention is drawn to the following paragraphs of the disclosure in the present application:

"[0006] The Applicant has discovered that molded reflectors with prisms of more than 4 mm in side length are prone to shrinkage problems. Indeed, shrink marks 15, which are shown in dotted lines in FIG. 2, are created during the cooling of the plastic after the injection step and this affects the reflective properties of the prisms."

"[0013] The shrink marks 15 that on the retroreflector 13 are the result of known problem in the injection process of plastic and are **due to a non-uniformity of the thickness of the plastic that is injected.** The shrinkage of the piece depends on its thickness and takes places during the cooling of the plastic. In this case, the thickness of the plastic varies **between a minimum thickness of "e.sub.1" and a maximum thickness of "e.sub.2" corresponding to the cavity of the prism, where "e.sub.2" is much larger than "e.sub.1".** Therefore, since the thickness of the plastic is not constant, the faces of the prisms are deformed. It is not possible to maintain a constant thickness on a reflector since one side has to form the geometry of the prisms and the other side has to be flat in order to correctly return the light. The deformation of the faces affects the reflecting properties of the prisms, thus lowering the photometric values of the reflectors. Up to now, one solution to this problem has been to modify certain injection parameters during the injection process in order to mold reflectors up to 4 mm in prism side length" (emphasis added)

In view of the above-mentioned amendments and arguments provided, it is respectfully submitted that the present invention, as recited in new independent claim 1, is not only new, but also not obvious in view of the cited prior art, i.e. it would not have been obvious to a person skilled in the art to arrive to the present invention, and this easily, based on the teachings of Orito, Balint and/or Kingsbury without resorting to an inventive step. New independent claim 1 patentably distinguishes over the prior art and any combination thereof and is thus allowable. Dependant claims 2-7 are therefore also allowable, at least by reason of their respective dependencies.

Claims 2 and 3 were rejected under 35 U.S.C. 103(a) as being unpatentable over Balint, Orito, Kingsbury and Rabl. As discussed above, claim 1 patentably distinguishes over the combination of Balint, Orito and Kingsbury. Rabl fails to remedy the shortcomings of the combination of prior art. Therefore, claim 1 patentably distinguishes over the combination of Balint, Orito, Kingsbury and Rabl. Claims 2 and 3 also patentably distinguish over the same combination for at least the same reasons. Applicant requests that the rejection of claims 2 and 3 be withdrawn.

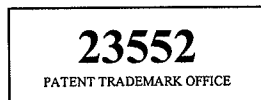
A speedy and favorable action in the form of a Notice of Allowance is hereby solicited. If the Examiner feels that a telephone interview may be helpful in this matter, please contact Applicant's representative at (612) 336-4728.

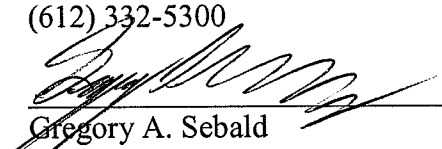
Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

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